

Property of E. A. Hughes

THE HARRIS



1913

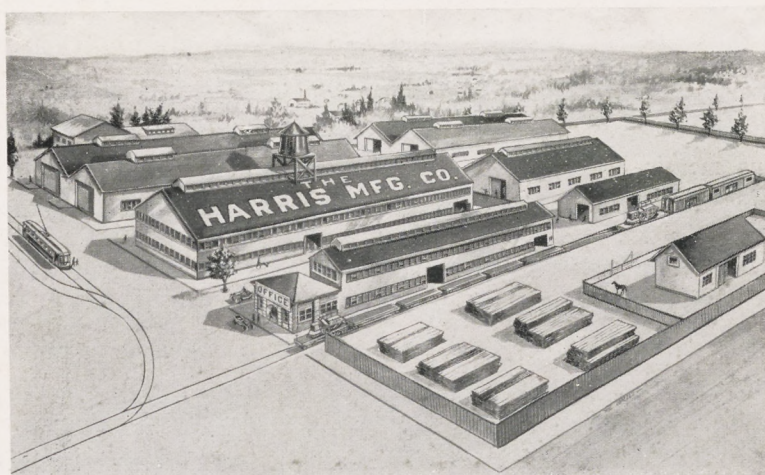
Gas Harvester

STOCKTON - CALIFORNIA



ELEVEN YEARS OF ECONOMICAL AND SATISFACTORY SERVICE

HARRIS GAS HARVESTERS



NINETEEN HUNDRED THIRTEEN

The Harris Manufacturing Co.
Incorporated
of
Stockton, California, U. S. A.

Dawson-Wall Ad. Co., Stockton, Cal.



Two views showing **Harris Gas Harvesters** in actual field operation. Note the fact that but comparatively few horses are needed for traction purposes. The separating and cutting machinery being operated by means of a gas motor, independently of the forward progress of the harvester, there is an immediate saving in haulage expense.



Introduction

IN presenting to the public this descriptive Booklet of the 1913 Line of **Harris Combined Gas Harvesters and General Harvesting Machinery**, we do so with a justifiable pride in what we have accomplished during the eleven years we have been in business, and in the hopes that we can add further to the prestige that our products enjoy, by a wider distribution of their many points of acknowledged superiority.

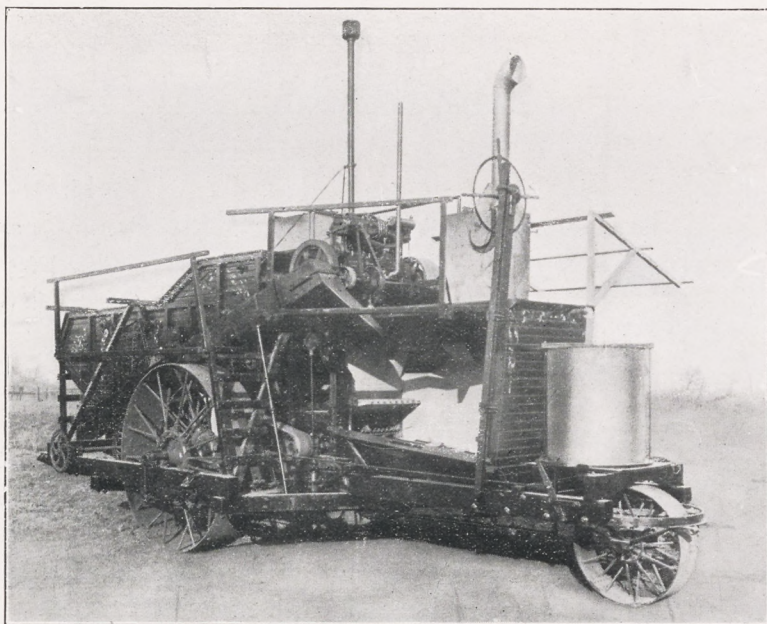
Eleven years ago, in 1902, this company started in business as a small harvester repair shop. Geo. H. Harris, its founder, had previously been Superintendent and Manager of the Matteson & Williamson Manufacturing Co. of Stockton, California. There he had learned thoroughly the theory and practice of combined harvester machinery. This experience proved very valuable to him when he started in business for himself. He had several theories which he determined to work out — theories which had to do with better and more satisfactory methods of harvesting than those then in vogue.

The first few years that Mr. Harris was in business, were devoted to repairing and rebuilding and to experimenting along the lines of a motor driven harvester that would stand extremely severe conditions. Success came at last and he began building a Gas Harvester that met with universal approval. From then on, business increased by leaps and bounds. Farmers who became acquainted with the merits of this machine, insisted upon having one. The company was hard put to it at times to fulfill the demand. However, steady progress was made and all customers treated fairly and well.

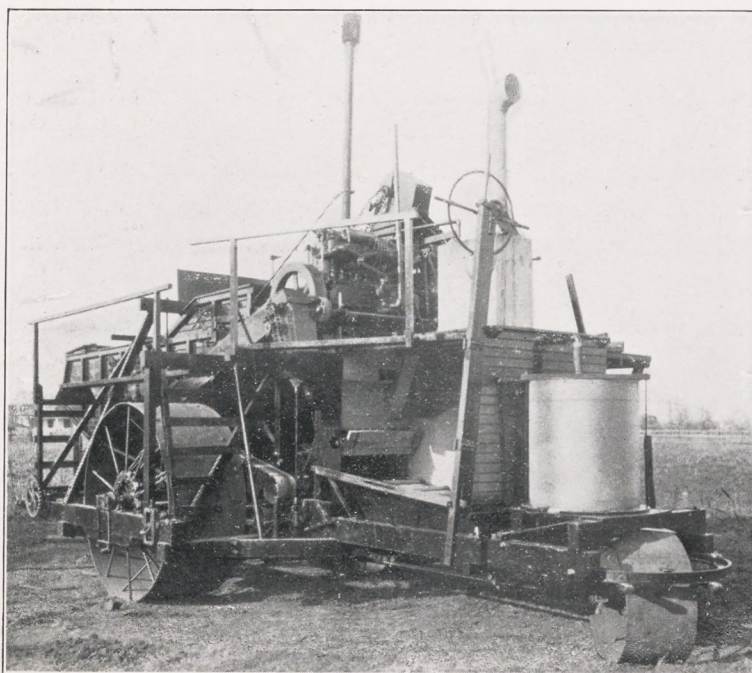
With a constantly growing demand, shop equipment and working space soon became inadequate and early in 1912 we began to plan for a bigger and better plant. These plans have now crystallized and taken effect in a new and modern factory covering four and one-half acres of ground. Five big buildings, with a combined floor area of 100,000 square feet, are now constructed or under course of construction. This will give us a plant that will take care of our growing business in a most efficient manner.

We have our own tracks and spurs, right in our yards, thus giving us direct connection with all railroads and boats. This makes prompt shipments practicable and possible. Over one hundred skilled and efficient employees assure you of the best possible service and most careful workmanship.

The new plant is located on East Street, at Park, and the local street cars pass in front. When you are in Stockton we shall be pleased to have you call and go over our factory.



The upper picture shows a view of the 1913 Model of the **Harris Upland Gas Harvester**, while the lower picture shows the model of the **Lowland Rig**.



1913 Models of Harris Gas Harvesters

ALL 1913 **Models of Harris Gas Harvesters** include the very latest and most approved structural features that our eleven years of successful experience have demonstrated are worth embodying in these machines.

Their construction is the very best that modern engineering skill and careful workmanship can produce. They are substantially built of the best materials and are equal to any strain that can possibly be put upon them. **All woodwork is put together with mortices, tenons and draw pins, and every joint goes together with paint.** All siding is painted before being put together and screws are used instead of nails for fastenings.

All shaft bearings are in perfect alignment, as we take particular pains to babbitt all bearings after the shafts are set in the machine.

All working parts are accessible and can be quickly gotten at for adjustment or oiling. In fact, it is not necessary to stop the machine, while in action, for oiling and other necessary attentions. This is a time saving feature that is worth a good deal to the busy farmer.

The frame is exceptionally rigid and strong, yet its individual timbers are of moderate weight. All joints are well braced and reinforced and will stand a tremendous strain before getting out of alignment. In fact, it is practically impossible to spring or warp a Harris Frame.

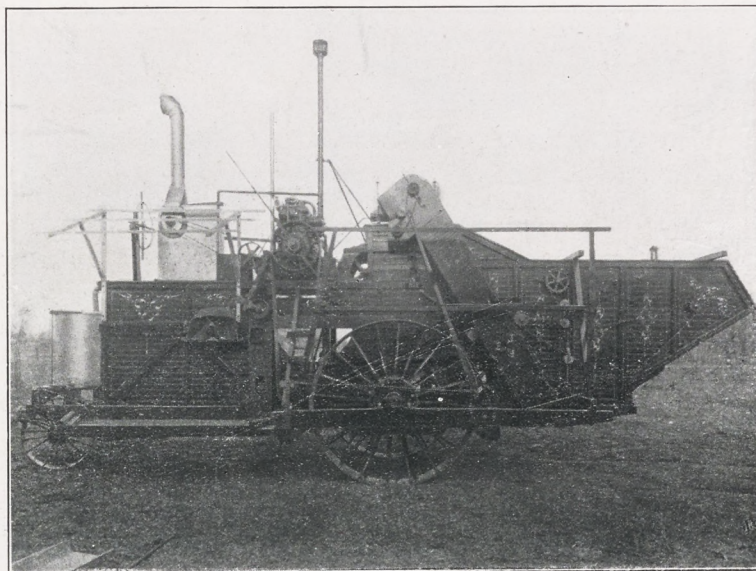
The principles of construction underlying the different models are practically identical. Slight changes in size and design are necessary to meet different conditions, but the material and workmanship used are the same. Each machine is equally high grade and the best in its class. None of these models are excessively heavy or clumsy, yet each one carries a good margin of safety in excess of any strain that may possibly be put upon it.

There is positively no other combined harvester on the market that will handle such a large volume at such a small cost for running expense and up keep. It shows to the best advantage under exceptionally severe conditions. Where other makes fail and give up the **Harris Gas Harvester** goes serenely on and handles the most difficult work. This fact explains the popularity of this machine amongst those farmers who have encountered nothing but trouble from the use of other makes.

Reliability, Strength, Large Volume, Low Upkeep and Running Cost, Satisfactory Results, Accessibility of Parts, and the showing that these machines make under difficult and severe conditions make **Harris Gas Harvesters** a wise investment on the part of any farmer. In fact, they are almost perfect examples of grain harvesting machinery.

Upland Gas Harvester

Regular Model.



PRINCIPAL DIMENSIONS.

30 Inch Cylinder
42½ Inch Separator
44 Inch Draper
20 Foot Cut

Main Wheel, 18 In. x 6 Ft.
Front Wheel, 12 In. x 3 Ft.
Horses Required, 14 to 18
Capacity, 30 to 50 Acres Per Day

Gas Motor, 4 Cylinder, 35 Horse Power

The Harris Regular Upland Gas Harvester is the best machine for the man who has strictly upland cutting to do. It has a tremendous capacity and can cover lots of ground.

Like all the Harris Machines it is exceptionally well made, has very rigid frame, perfect alignment of all bearings and will give many years of uniform and satisfactory service.

It is a great grain saver, owing to the special construction and adjustment of the separator shoe. An extra tailing overshot fan takes excellent care of all chaff and keeps it from constantly returning through the machine.

Its engine of 35 horse power is mounted over cylinder on top of separator and its weight comes upon the main carrying wheels. Experience has taught us that this is the only place where the engine should be mounted if best results are desired. **We own and control the patents on this feature.**

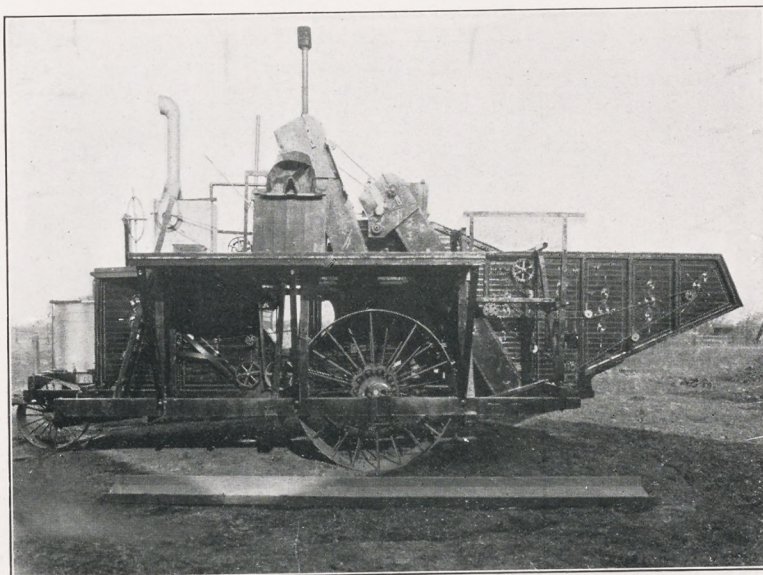
This machine can be used either as a combined harvester for field threshing; threshing from windrows; from bundles; or as a stationary outfit for stack threshing.

For bundle threshing we equip our Regular Machines with our own make of band cutting attachment which we have used for many years with marked success.

For the class of work that this machine is intended for, it is without a peer.

Lowland Gas Harvester

Regular and Special Models



PRINCIPAL DIMENSIONS.

Regular Model

35 Inch Cylinder
48½ Inch Separator
48 Inch Draper
20 Foot Cut

Main Wheel, 18 to 30 In. x 6 Ft.
Front Wheel, 18 In. x 3 Ft.
Easily Hauled by Average Gas Tractor
Capacity, 900 to 1600 Sacks Per Day

Gas Motor, 4 Cylinder, 40 Horse Power

This machine is intended for much heavier work than the regular Upland Rig. It has larger capacity, is more strongly built and has more engine power. It is capable of handling very heavy grain and will take care of all the straw and weeds that the header will furnish.

It has a 40-horse power, four-cylinder motor that is very powerful and direct in action.

The sacking platform on this model is on top of the machine where it is more conveniently situated and out of the dust and dirt. The sacking chute leads from this platform to the ground and is so constructed that it dumps the sacks easily and naturally without bursting them or leaving them in the way of the machine. See page 15.

Special Lowland Gas Harvester

PRINCIPAL DIMENSIONS.

40 Inch Cylinder
54½ Inch Separator
Header, 20 Foot Cut and Up

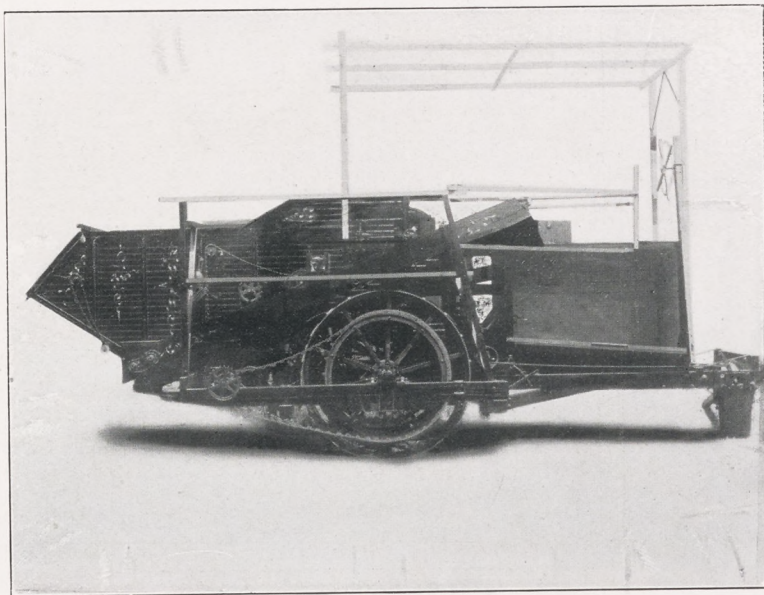
Main Wheel, 18 to 30 In. x 6 Ft.
Front Wheel, 18 In. x 3½ Ft.
Capacity, 1100 to 2000 Sacks Per Day

Gas Motor, 4 Cylinder, 45 Horse Power

For those who desire a machine of greater capacity or whose needs require it, we recommend the use of this specially constructed model.

Regular Standard Horse Harvester

Built Only to Order.



PRINCIPAL DIMENSIONS.

30 Inch Cylinder
42½ Inch Separator
16 to 20 Foot Cut

Main Wheels, 18 In. x 6 Ft.
Horses Required, 24 to 30
Capacity, 35 to 45 Acres Per Day

This machine is intended for farmers on average size ranches who do not desire to use a gas driven harvester. It serves its purpose as satisfactorily as the other **Harris Models**, but is not intended for use except on firm ground and in even grain. Where the grain is heavy and lodged the motor driven machine is the best. Like all other **Harris Models** this machine is of best construction and extremely well fitted for its class of work.

Junior Standard Horse Harvester

Built Only to Order.

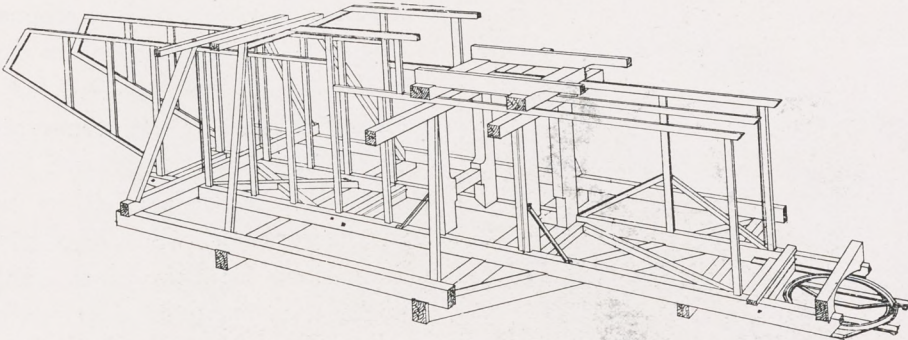
PRINCIPAL DIMENSIONS.

28 Inch Cylinder
36½ Inch Separator
16 to 20 Foot Cut

Main Wheels 16 In. x 5 Ft. 4 In.
Horses Required, 20 to 26
Capacity, 35 to 40 Acres Per Day

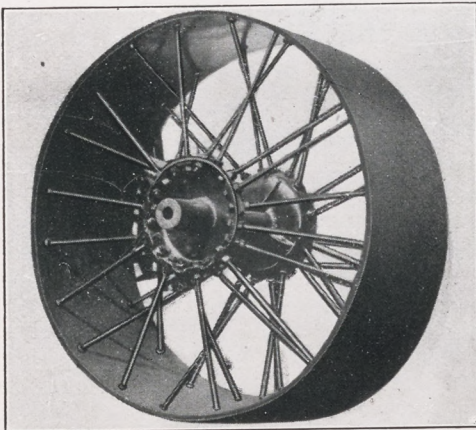
This model is designed primarily for the needs of the rancher with small or medium acreage to take care of. It requires the minimum number of horses and men to operate, and its work is just as satisfactory as that of the larger model, but, of course, its capacity is less. Its construction and general lines are up to the usual **Harris Standard**.

Main Frame



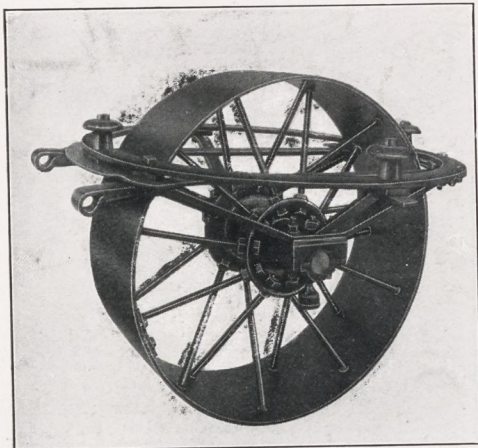
The Main Frame of all **Harris Harvesters** follow the same general line of construction. They are absolutely rigid and so braced and reinforced that they will withstand any possible strain that may be put upon them. Joints cannot possibly work loose, nor can the frame buckle or warp. All joints are fastened with mortices, tenons and draw pins. No nails are used as fastenings. All siding, decking, etc., goes on with screws that will not work loose. All joints, whether on frame, decking or siding are treated with a weather proof paint before being put together. This prevents dampness or other weather conditions from affecting the joints.

Main Wheel



The Main Wheels of all **Harris Models** are the strongest and most substantial wheels ever put on a combined harvester. They have an extremely heavy hub of large diameter and are braced with cross spokes, as well as perpendicular ones. The wheel cannot possibly twist or rack out of shape. Another strong feature is the fact that this wheel has no rims to work loose or slip — no rivets to cut and no tire setting to do. This wheel has given universal satisfaction everywhere it has been used.

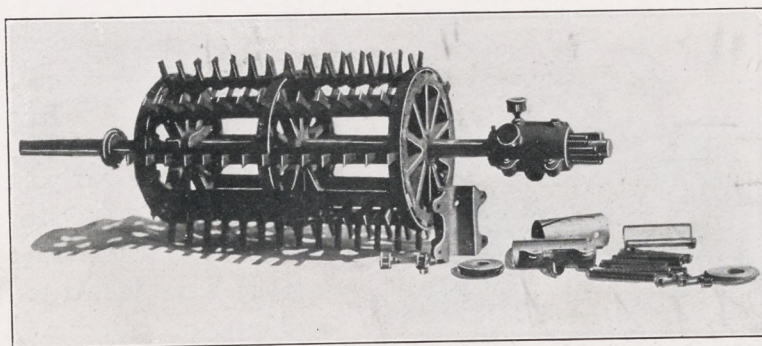
Front Wheel and Turntable



The Front Wheel on all combined harvesters is subjected to an enormous strain—not only in supporting its share of the weight of the machine, but in turning the same. It consequently, must be very substantially built. All Front Wheels in Harris Machines are constructed along the same lines as explained in describing the Main Wheel. There is the same heavy bell hub and the system of cross braced spokes. It has strength for its work and a good margin of safety.

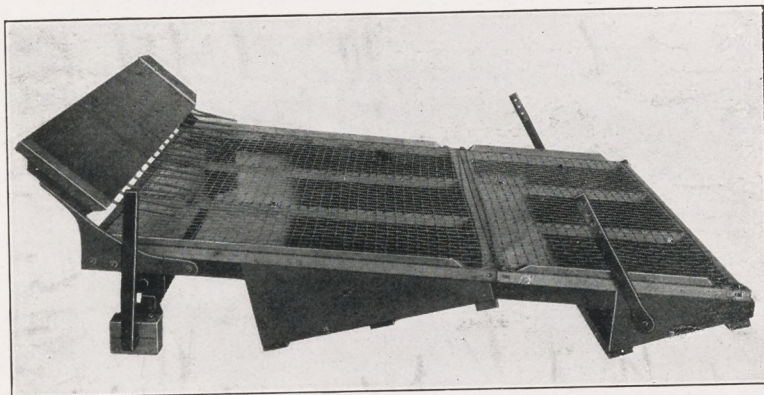
The front wheel Turntable of all **Harris Harvesters** is composed of two heavy steel circles—one running on roller bearings within the other. The front wheel boxes are bolted to strong steel braces on the inner circle. The outer circle is firmly bolted to the main frame of the machine. This method we have found, by experience, to be strong, simple, durable and most effective.

Cylinder With Roller Bearing Boxes



The Cylinders of all Harris Models are of the 10 bar type. Each Cylinder is exceptionally strong in its construction and is balanced perfectly in the lathe, after shaft is keyed. We use **Hyatt High Duty Roller Bearing Boxes** with extra large rollers. This insures smooth and easy action and overcomes all friction. Double grease cups on shaft. We have used this cylinder for years without hearing a single complaint, have never heard of a cylinder bearing running hot or a cylinder shaft getting out of alignment.

Separator Shoe

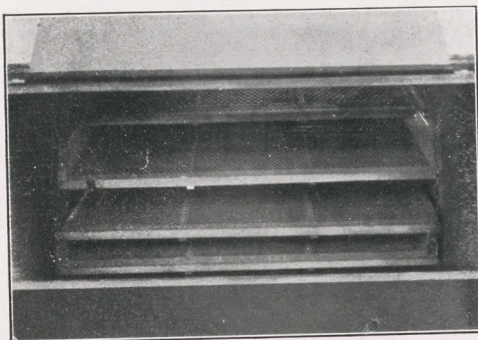


The Harris Separator Shoe is of ample width and length to handle all grain with the most marked success. There are two fans in the shoe—one undershot fan of large diameter in front for the main screen and a smaller overshot fan for return screen. This shoe is a celebrated grain saver. It is so positive in its action that every kernel of grain is properly screened and dropped into its rightful place, instead of passing on and over the shoe to be dumped with the chaff and straw. Harvesting is a mighty serious business for the farmer and he should not take any chances with a harvesting machine that does not separate and save him every bit of grain.

Cleaner Shoe

Rear End View.

The Harris Automatic Cleaner Shoe requires no attention whatever. All adjustments are made by simply moving a lever on the side of the separator. This Shoe is



an integral part of the separator and its work in properly cleaning grain is considered remarkable by all who have watched it in action. The Shoe is enclosed and cannot shake out and lose any grain. All chaff and dust is blown back through the main part of machine and cannot interfere with the operators at any time.

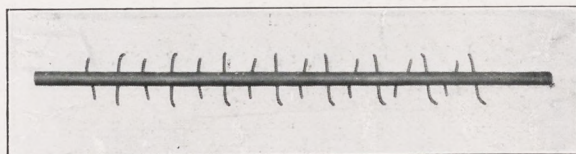
Separator Fan



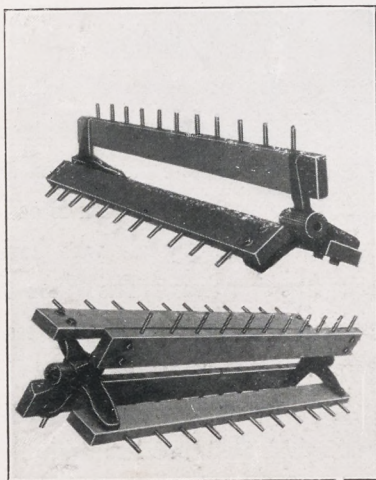
Harris Separator Fans are built especially for strength, lightness and general efficiency. They are large in diameter, have five arms, wide beater, a large throat and adjustable wind boards. Built on solid steel shafts of clear grained lumber. Adjustment is by shutters of special design, which can be regulated from top of separator, to give any desired amount of wind. You will never have any trouble with these fans.

Beaters and Pickers

The Beaters and Pickers on all Harris Machines are built on solid steel shafts and made extra strong. They are made of the best possible materials and do their work easily and satisfactorily.



Pickers



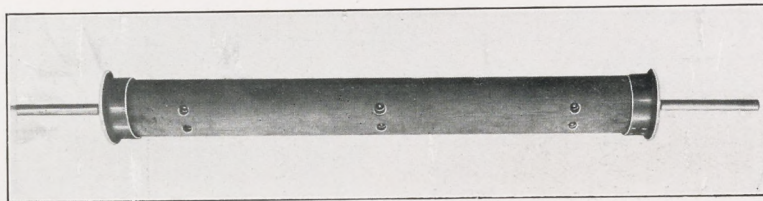
Beaters

There are two of these four-wing beaters, over the grain carrier, so constructed and arranged that they never clog up or carry around any weeds or other materials that may get into the machine.

At the top of the grain carrier and over the straw carrier are the pickers, and over the drop straw carrier are two three-wing beaters. These thoroughly tear apart and separate all straw and weeds from the grain, thereby sifting the grain through the straw carrier to the shoe to be elevated to the cleaner and from there into the sacks.

Grain Carrier Drum

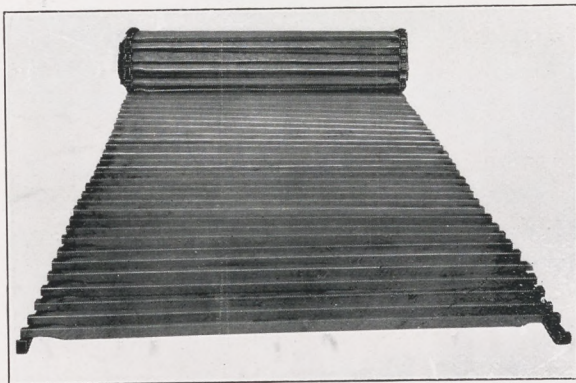
Top.



The top drum of the **Harris Grain Carrier** is mounted on a steel shaft of extra large diameter. This top shaft has a drum with flange pulleys instead of flange pulley on each side, thereby lengthening the life of grain carrier, insuring smoother action and a better gripping surface. This is another one of the many small and apparently unimportant details in **Harris Harvesters** that distinguish them above all other makes.

Straw Carrier

Chain—Lowland Rig.

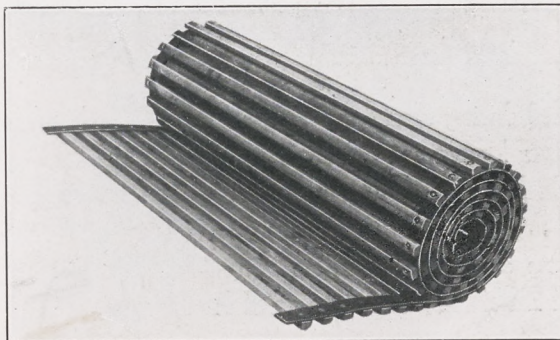


The **Straw Carrier** in the **Harris Lowland Rig** is constructed especially for heavy duty. We use **Jackson Feeder Chains** on same. In lowland threshing where heavy, weedy grain is encountered the straw carrier is called upon to do extra work. You'll find the **Harris Straw Carrier** equal to it.

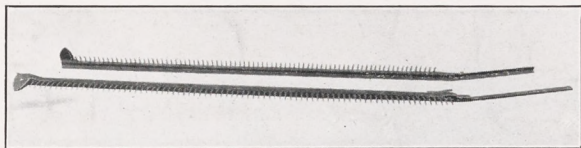
Straw Carrier

Leather—Upland Rig.

Where a good even stand of grain on firm ground is encountered, the straw carrier is necessarily called upon to a lesser degree than in heavy work. Therefore, we equip our **Upland Rigs** with Straw Carriers mounted on high-grade leather belting. Experience has shown us that this method is entirely satisfactory and efficient.



Harris Low Cutter Sickle Bar

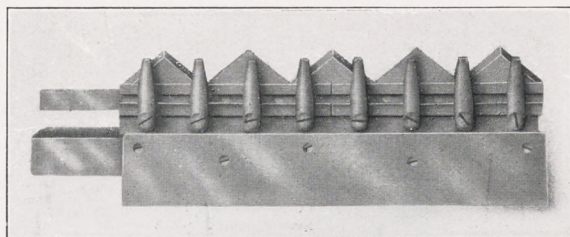


The **Harris Low Cutter Sickle Bar** is strongly made of hardwood and angle steel. It is exceptionally strong, yet flexible and elastic. It cuts

close to the ground without difficulty when so desired. This gives it a great advantage where grain is lying on ground or the surface is uneven. The sickle bar runs are of iron, which gives the bar better wearing qualities and more rigidity than if it were made of wood.

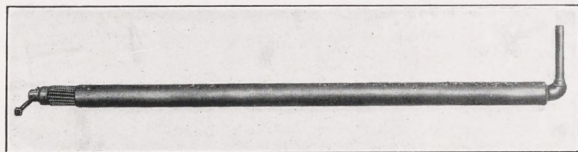
Hampton Sickle Bar

This bar is made especially for use in heavy tangled down grain or in grain that is badly tangled with weeds. On parts of the Delta Lands where the ground is soft and the grain in bad shape it is impossible to



use the ordinary sickle bar. **The Hampton Bar**, however, gives very satisfactory results under such conditions. It is impossible to choke up this bar. We have secured and control the exclusive rights for the use of same.

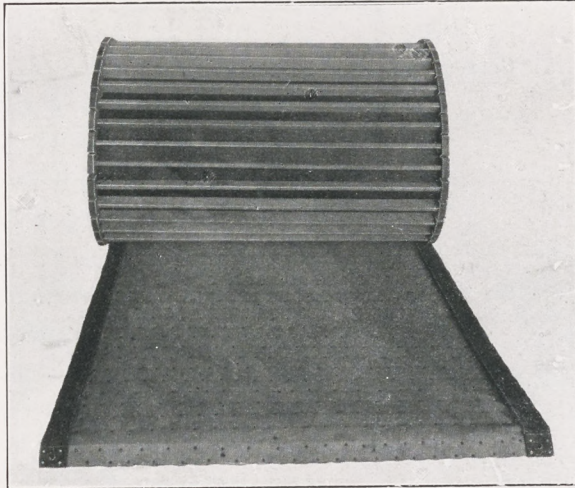
Draper Roller



The Draper Roller on all **Harris Machines** is of a special design and is manufactured exclusively by us. It runs in roller bearings and can be

oiled during operation without stopping machine or unbuckling the draper. We have never known one of our rollers to run hot. This obviates at once all danger of fire, which is a constant menace where old style wooden boxes are used. The easy action of this roller allows the draper to run free at all times, which is a decided advantage. Ease of action—reduction of friction—means better work and less wear on the parts—all **Harris Machines** are noted for this quality.

Grain Carrier



The Grain Carrier used in all **Harris Harvesters** is constructed of the best materials obtainable, regardless of cost. The foundation of every carrier is a heavy full thread, hard finished duck treated with a thick coat of glue to give it the necessary stiffness and wear resisting qualities. The cells are made of best grade maple and the sycamore heads are fastened on with dowels. Straps are made of best quality leather belting. We have a special machine for the manufacture of the materials that go into these grain carriers.

Sacking Platform and Chute

On all **Harris Lowland Rigs** we put the **Sacking Platform** directly over the main wheels. This tends toward distributing all weight evenly over the frame of machine and takes all strain off the corner of the harvester. It also gives more room for the men to work in and lifts them up out of the dust and dirt. This platform is strongly built and braced and cannot become racked out of shape from the weight of filled sacks dropping on to the chute. The chute takes care of the sacks naturally and easily, dumps them without danger of bursting and has sufficient clearance to permit the harvester backing up where necessary without tearing sacks already on the ground.

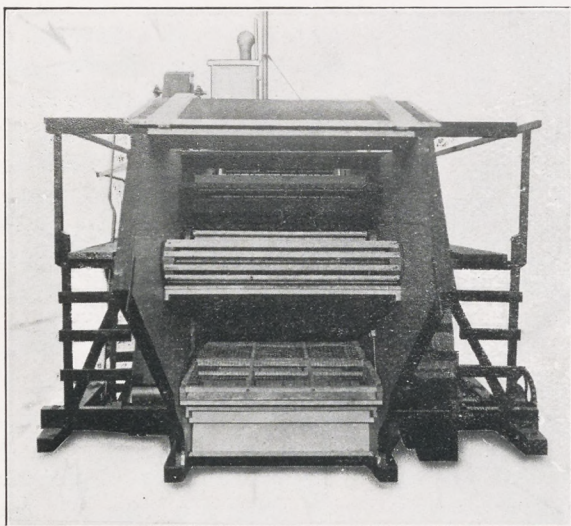
Drapers

Harris Drapers are quality goods. They are made of select materials by careful and experienced workmen. The canvas, belting, sticks, buttons and rivets used in their construction are highest class in every particular and the best that we can buy, regardless of price. We have no hesitancy in stating that our drapers will give you the most satisfactory service and the longest possible wear.



Rear View of Separator

Showing Straw Carrier and Back Beater



This picture shows a rear end view of the **Harris Separator**, which arrangement is common to all our machines. The **Straw Carrier** and **Back Beater** are in plain sight. Note the ample separating capacity and Back Beater located just over the Straw Carrier. This Straw Carrier is a double drop affair, which works most effectively. In our separating system we use a fan in the Straw Carrier, which works in conjunction

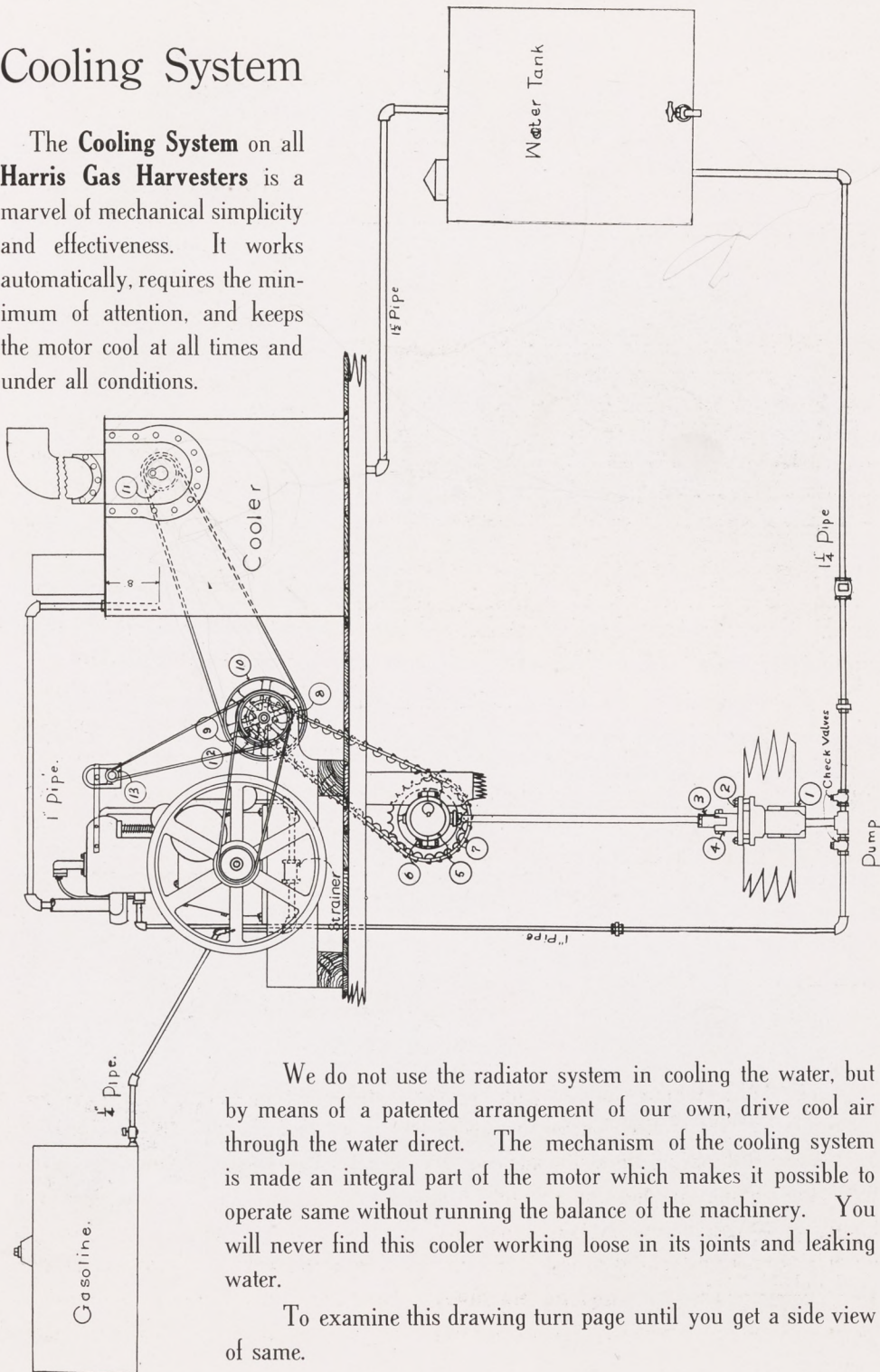
with two beaters and the drops in the straw carrier, thereby making it possible to separate all the grain from the straw. On all **Lowland Rigs**, where the straw is extremely heavy and intermingled with weeds, we construct the straw carrier with **Jackson Feeder Chains** instead of leather belting.

Header

The 1913 Header supplied with all **Harris Models** is up-to-date in every respect. Control is by Tiller Wheel, located just above the "Feed House," where the operator has an unobstructed view of the sickle and complete header. **The Harris Header** has exceptional low cutting qualities and strength, without undue weight. It is put together with hinges, and hence is quickly taken apart for moving and other purposes. There are no bolts to unscrew or nuts to lose. We furnish a **Double Reel** for all **Upland Models** and a **Balance Reel** for **Lowland Machines**. The Draper and Sickle, as described on pages 14 and 15 respectively, are remarkably easy in action and most efficient in results.

Cooling System

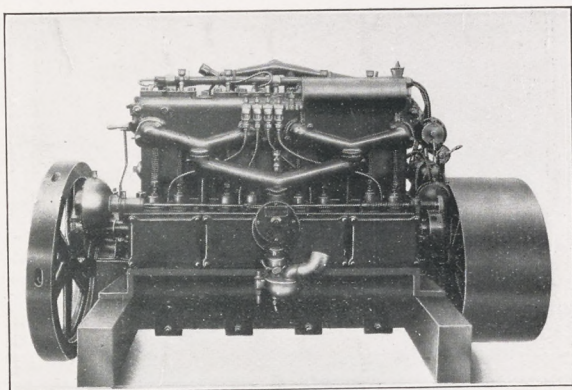
The **Cooling System** on all **Harris Gas Harvesters** is a marvel of mechanical simplicity and effectiveness. It works automatically, requires the minimum of attention, and keeps the motor cool at all times and under all conditions.



We do not use the radiator system in cooling the water, but by means of a patented arrangement of our own, drive cool air through the water direct. The mechanism of the cooling system is made an integral part of the motor which makes it possible to operate same without running the balance of the machinery. You will never find this cooler working loose in its joints and leaking water.

To examine this drawing turn page until you get a side view of same.

The Harris Harvester Motor



The **Gas Motor** used on all **Harris Gas Harvesters** is built especially to fit our special needs and requirements. It has a positive friction clutch and perfect power and requires no attention. It is an economical fuel user and can be adjusted to run satisfactorily on the cheapest of low grade oils.

The materials and workmanship used in its construction are the very best that can be pro-

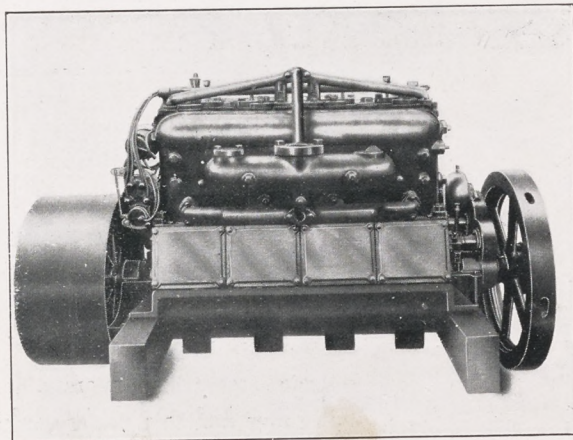
cured. Every part is mechanically perfect and interchangeable, so that repairs are easily and quickly made. All working parts, subject to wear, are steel case hardened.

The engine is of the four cylinder, four cycle type, is always easy to start and gives the highest possible efficiency with the least amount of fuel. Float feed carburetors insure steady and even gas supply. All joints are ground to fit, thus eliminating entirely all annoyance from leaky packed joints.

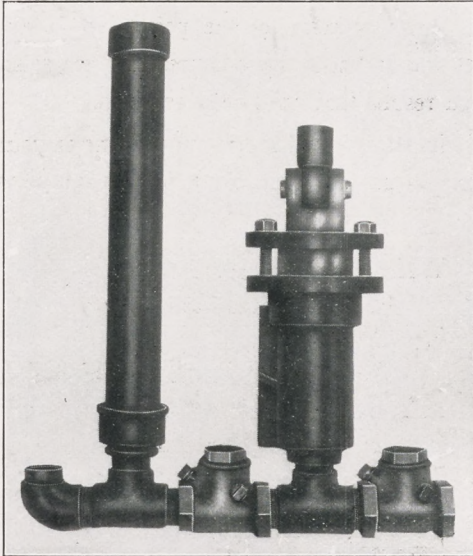
Lubrication is well taken care of. We use the splash oiling system, so generally and satisfactorily used by manufacturers of high grade automobiles. This system is automatic in action and requires no attention, except an occasional filling of the oil receptacles.

We furnish this motor in three different sizes:

35 horse power on Upland Rigs, 40 and 45 horse power on Lowland Rigs.



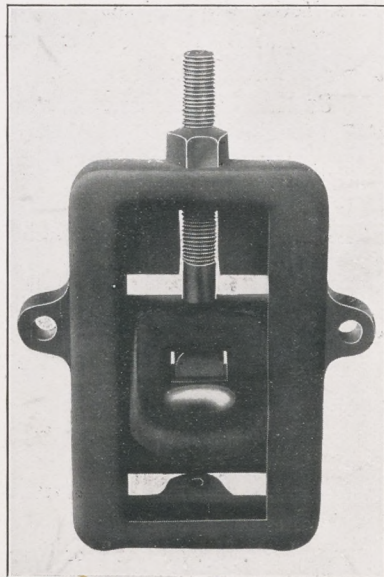
Circulating Pump



The **Harris Circulating Pump** on all gas harvesters is direct and positive in its action. It is of the plunger type, operated positively by check valves, and is chain driven direct from the motor to an eccentric which is made an integral part of the driving system. This eliminates any possible chance of slipping and allowing the pump to fail in its operation. We guarantee this pump to deliver water to the cooling system of motor in sufficient quantities to keep same sufficiently cool. All parts are accessible and easily adjusted. It is simple in construction and strongly built.

Adjustable Header Hinge

For all machines used for lowland work where the ground is extremely soft, we have designed an **Adjustable Header Hinge** that makes it possible to keep the cutter bar in conformity, at all times, to the contour of the land. We have found that the extreme weight resting upon the main wheels causes them to sink in soft ground, sometimes several inches lower than the header wheel which carries a much smaller load. The old style method of adjusting the header, under these conditions, was to drop a link or so on the weight arms. This had a tendency to warp or strain the header. The new hinge now supplied on all **Harris Lowland Rigs** obviates these troubles. It is easily and quickly adjusted and keeps the header in its normal position at all times.



Partial List of Recent Purchasers

You all know the old saying "The proof of the pudding is in the eating thereof." Therefore, we give below the names and addresses of some of the people who have recently purchased **Harris Combined Harvesters** and who have expressed great satisfaction with their purchases and the very good results that have been obtained.

This list, for lack of space is necessarily incomplete. It may be that some of your friends or neighbors are included in the same. If so, ask them about the **Harris Gas Harvester**.

Brown Brothers, Colledgeville, Cal.
40 H. P. Lowland Gas Harvester
Geo. Minges, French Camp, Cal.
40 H. P. Lowland Gas Harvester
Bailey & Sayles, Waterloo, Cal.
35 H. P. Upland Gas Harvester
N. J. Dorn, Madera, Cal.
Junior Horse Harvester
Alphonso Gummrett, Tracy, Cal.
35 H. P. Upland Gas Harvester
Gordon Bros., Vernalis, Cal.
Two 35 H. P. Upland Gas Harvesters
Miller Bros., Atlanta, Cal.
35 H. P. Upland Gas Harvester
Holman Bros., Farmington, Cal.
35 H. P. Upland Gas Harvester
Thos. McCormick, Rio Vista, Cal.
40 H. P. Lowland Gas Harvester
James Turner, French Camp, Cal.
35 H. P. Upland Gas Harvester
E. P. Brown, Madera, Cal.
35 H. P. Upland Gas Harvester
Dr. J. A. Stratton, Newman, Cal.
35 H. P. Upland Gas Harvester
F. D. Brown, Minturn, Cal.
Junior Horse Harvester
Claude Hining, Califa, Cal.
35 H. P. Upland Gas Harvester
Linne Bros., Tracy, Cal.
35 H. P. Upland Gas Harvester
J. H. Oeste, Davis, Cal.
30 H. P. Upland Gas Harvester
Frank McCormick, Banta, Cal.
30 H. P. Upland Gas Harvester
John W. Emde, Lodi, Cal.
35 H. P. Upland Gas Harvester

T. H. Minnehan, Stockton, Cal.
35 H. P. Upland Gas Harvester
Peter Cook, Rio Vista, Cal.
Three 40 H. P. Lowland Gas Harvesters
H. T. Desmond, Madera, Cal.
Junior Horse Harvester
Scheckler Bros., Antioch, Cal.
35 H. P. Lowland Gas Harvester
Dave Asels, Banta, Cal.
35 H. P. Upland Gas Harvester
A. A. Fitzgerald, Stockton, Rt. 1
35 H. P. Lowland Gas Harvester
Dan McCormick, Rio Vista, Cal.
40 H. P. Lowland Gas Harvester
John Haack, French Camp, Cal.
35 H. P. Lowland Gas Harvester
Rush & Stewart, Rio Vista, Cal.
40 H. P. Lowland Gas Harvester
Woods & Lynch, Stockton, Cal.
40 H. P. Lowland Gas Harvester
Henry Adicks, Bethany, Cal.
45 H. P. Lowland Gas Harvester
C. H. Brown, Minturn, Cal.
Junior Horse Harvester
Benj. J. Crow, Madera, Cal.
Junior Horse Harvester
J. L. Blossom, Stockton, Cal.
35 H. P. Lowland Gas Harvester
Wm. Schmidt, Tracy, Cal.
30 H. P. Upland Gas Harvester
Andrew Rustan, Banta, Cal.
30 H. P. Upland Gas Harvester
J. E. Meyers, Banta, Cal.
30 H. P. Upland Gas Harvester



